

Technical Bulletin

Part No. 74-0113

DataStage RedBrick Load

This technical bulletin describes Release 1.3 of DataStage RedBrick Load, formerly called Red Brick Bulk Load Plug-in. This stage loads data from any DataStage stage into a Red Brick database.

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Introduction

This technical bulletin describes the following for Release 1.3 of RedBrick Load, updated for Release 7.0 of DataStage:

- Functionality
- Terminology
- Configuration
- Installation
- Mode of operation
- Control files
- Input properties

RedBrick Load enables you to rapidly and efficiently prepare and load streams of tabular data from any DataStage stage (for example, the ODBC stage, the Sequential File stage, and so forth) into tables of the target Red Brick Warehouse.

RedBrick Load is a passive stage that supports one or more stream input links (but no output links). Each input link corresponds to a different bulk loading session within a DataStage job.

Bulk loading can occur automatically only if both the DataStage job and Red Brick server are on the same physical machine.

Functionality

RedBrick Load has the following functionality:

- Support for data files that exceed the 2-GB file size limit for 64-bit file systems.
- Generation and automatic execution of Red Brick commands to load data into the Red Brick Warehouse.
- Generation of intermediate data files in delimiter-separated ASCII format.
- An option to drop and create simple target tables as defined in the column information of the corresponding link (for example, tables that have no referential constraints, triggers, or stored procedures).
- An option to generate the data and script files only for manual execution.
- An option to let you specify commands to run the BeforeCommand and the AfterCommand, for example, to initialize the database.

- Support of MetaStage. For more information, see *MetaStage User's Guide*.
- Support of NLS (National Language Support). For more information, see *DataStage NLS Guide*.

The following functionality is not supported:

- Complex TMU or RISQL scripts (you can create these using any text editor, such as WordPad, Notepad, and so on)
- Binary data types
- Generation of fixed-record format for data files

Terminology

The following table explains the Red Brick terms used in this document:

Term	Description
Bulk Load Plug-in	A passive stage whose role in a DataStage job is to take streams of tabular data and load them into tables of a target database.
control file	A file of commands that bulk loads a table from a single link. The control file acts as an input file to the TMU utility. See "Input Properties" on page 4 for details.
data file	An ASCII file of row/column data from an input link that is to be loaded.
RISQL	An SQL entry tool with a set of business analysis extensions to SQL for warehouse databases.
SQL file	An input file to RISQL, consisting of standard SQL or RISQL extension statements.
TMU	The Table Management Utility that loads data into the Red Brick Warehouse and maintains the tables, indexes, and referential integrity.

Installing RedBrick Load

For instructions and information supporting the installation, see *DataStage Plug-In Installation and Configuration Guide*.

Mode of Operation

RedBrick Load has two modes of operation:

- **Automatic Mode.** The stage executes the table creation command, the Before Command, the data loading command, the After Command, and the command for removing intermediate data files.
- **Manual Mode.** If you enter **N** to execute Load Automatically, the stage stores the commands in a batch file without executing them. You can run the batch file later to execute the commands.

RedBrick Load generates intermediate data files, the TMU control file, the SQL file for table creation, and a batch file. The batch file, stored in the control file directory, contains the BeforeCommand, the AfterCommand, the RISQL command for table creation, the TMU command for data loading, and the NT command for intermediate data file removal, if applicable.

Note: You must run the batch file from the project directory if the directories entered contain relative pathnames.

Control Files

The RedBrick Load stage can generate up to nine files per link, including the following:

- A control file for data loading if no CustomCntlFile is entered
- An SQL file for table creation
- An intermediate data file to store data from the (input) link
- A batch file to store the spawn commands
- A log file for each of the spawn commands if applicable: table creation, BeforeCommand, data loading, AfterCommand, and removal of the intermediate data file

The following table lists the file name used if a custom control file is entered, the default file name used if no custom control file is entered, and the description for the file:

File Name (CustomCntlFile)	File Name (No CustomCntlFile)	Description
<i>CustomCntlFile.tmu</i>	<i>database_table.tmu</i>	Control file for data loading
<i>CustomCntlFile.sql</i>	<i>database_table.sql</i>	SQL file for table creation
<i>CustomCntlFile.dat</i>	<i>database_table.dat</i>	Data file to store data from the input link
<i>CustomCntlFile_table.bat</i>	<i>database_table.bat</i>	Batch file to store the spawn commands
<i>CustomCntlFile_create.log</i>	<i>database_table_create.log</i>	Log file for table creation
<i>CustomCntlFile_load.log</i>	<i>database_table_load.log</i>	Log file for data loading
<i>CustomCntlFile_before.log</i>	<i>database_table_before.log</i>	Log file for the BeforeCommand
<i>CustomCntlFile_after.log</i>	<i>database_table_after.log</i>	Log file for the AfterCommand
<i>CustomCntlFile_removal.log</i>	<i>database_table_removal.log</i>	Log file for the removal of the intermediate data file

Input Properties

RedBrick Load supports the following input properties that are visible from the DataStage Manager. The following table includes these column heads:

- **Property** is the text that the job designer sees in the stage editor user interface.
- **Default** is the text used if the job designer does not supply any value.
- **Help Text** describes the properties.

Property	Default	Help Text
Database Name	None	(Required) Database name.
User ID	None	Name used to connect to the Red Brick database.
Password	None	Password for the database.
TableName	None	Name of the Red Brick database table to be loaded. (Required if Custom Control File Name is not specified.)
Create a new table?	Y	Y=Yes, N=No. Creates the table, using the column definitions for the link.
TMU Mode	insert	Valid values for operation of the DataStage Manager: append, replace, modify, update, and insert.
Delimiter	(vertical bar)	Field delimiter character used to separate columns in the intermediate data file.
Stop loading after a number of discarded rows	1	Number (0 or more) of discarded rows after which to stop loading.
Custom Control File Name	None	Name of the custom control file. Otherwise, defaults to the generated control file named <i>database_table.tmu</i> .
Before Command	None	Windows NT commands executed before table creation and loading.
After Command	None	Windows NT commands executed after table creation and loading.
Remove intermediate data file	Y	Y=Yes, N=No. Y removes the intermediate data file after the stage executes the appropriate After Command.
Data File Directory	None	Name of the directory containing the intermediate data files that store data from the input link. Otherwise, defaults to the name of the directory for the DataStage project.

Property	Default	Help Text
Control File Directory	None	Name of the directory containing the custom control files that load data, create tables, and so forth. Otherwise, defaults to the name of the directory for the DataStage project.
Log File Directory	None	Name of the directory containing logs files with information about table creation, Before Command, data loading, After Command, or removal of the intermediate data file. Otherwise, defaults to the name of the directory for the DataStage project.
Discard File Directory	None	Name of the directory containing the rows that are not loaded by the TMU. Otherwise, defaults to the name of the directory for the DataStage project.
Load Automatically	Y	Y=Yes, N=No. If N is entered, the stage only prepares the intermediate data file and the script files. You can later load the data by running the batch file stored in the control file directory. You must run this batch file from the project directory if the specified directories, such as CntlDirectory and LogDirectory, do not use an absolute path.

For more information about Red Brick Warehouse databases and the TMU loading utility, see their *Table Management Utility Reference Guide*.